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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,588	11/05/2003	Ziv Reich	26749	6409

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EXAMINER	
DOLE, TIMOTHY J	
ART UNIT	PAPER NUMBER
2831	

MAIL DATE	DELIVERY MODE
05/15/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/700,588	REICH ET AL.	
	Examiner	Art Unit	
	TIMOTHY J. DOLE	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-151* is/are pending in the application.

4a) Of the above claim(s) *1-35 and 54-133* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *36-43,49-53,134-141 and 147-151* is/are rejected.

7)☒ Claim(s) *44-48 and 142-146* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 36-43, 49-53, 134-141 and 147-151 are rejected under 35 U.S.C. 102(b) as being anticipated by Reich et al. (US 2002/0118005).

Referring to claims 36 and 134, Reich et al. discloses a device and method for monitoring fluid locomotion (abstract) in a fluid channel (fig. 3 (32)), the device comprising: a capacitor (fig. 3, capacitor formed by (12) and (14)), being formed on or integrated with the fluid channel (paragraph [0104]) and having a variable cross-sectional area (paragraph [0105]); and electrical contacts (fig. 1 (15)), connecting said capacitor to a capacitance measuring device (fig. 1 (18)); said variable cross-sectional area is selected so that a change in a capacitance of said capacitor represents a location of the fluid in the fluid channel (paragraph [0102]).

Referring to claims 37 and 135, Reich et al. discloses the device and method as claimed wherein the fluid is selected from the group consisting of water, a body fluid, a bacterial cell suspension, a protein solution, an antibody solution, a nucleic acid solution and ink (paragraph [0108]).

Referring to claims 38 and 136, Reich et al. discloses the device and method as claimed wherein said capacitor is positioned in proximity to an edge of the fluid channel (fig. 6), so as to monitor a rate of drop formation near said edge (paragraphs [0108]).

Referring to claims 39 and 137, Reich et al. discloses the device and method as claimed wherein said capacitor comprises two conductive plates (fig. 2a (12) and (14)) defining an inter-plate volume (fig. 2a) having a longitudinal axis (fig. 2a (13)), said conductive plates having constant transverse dimensions along said longitudinal axis (fig. 2a and paragraph [0038]).

Referring to claims 40 and 138, Reich et al. discloses the device and method as claimed wherein said capacitor comprises two conductive plates (fig. 2b (12) and (14)) defining an inter-plate volume (fig. 2b) having a longitudinal axis (fig. 2b (13)), said conductive plates having a variable transverse dimensions along said longitudinal axis (fig. 2b and paragraph [0100]).

Referring to claims 41 and 139, Reich et al. discloses the device and method as claimed wherein the fluid channel is a capillary (fig. 3 (32)).

Referring to claims 42 and 140, Reich et al. discloses the device and method as claimed wherein said capacitor comprises two conductive plates (fig. 3 (12) and (14)) engaging opposite faces of said capillary (fig. 3).

Referring to claims 43 and 141, Reich et al. discloses the device and method as claimed wherein said capillary has a profile selected from the group consisting of a polygonal profile, a circular profile, an ellipsoidal profile and an irregular pattern profile (paragraph [0104]).

Referring to claims 49-51 and 147-149, Reich et al. discloses the device and method as claimed wherein a size of said capacitor is in a nanometer, millimeter and centimeter scale (paragraph [0131]). It should be noted that Reich et al. discloses that the

capacitor in the example is 100 nm long (paragraph [0131]), which is equivalent to .0001 mm and .00001 cm, and is therefore considered to be part of the millimeter and centimeter scales.

Referring to claims 52 and 150, Reich et al. discloses the device and method as claimed wherein said capacitance measuring device is selected from the group consisting of a capacitance meter and a capacitance bridge (paragraph [0102]).

Referring to claims 53 and 151, Reich et al. discloses the device and method as claimed wherein said capacitance measuring device is configured and designed to allow measuring of capacitance at a resolution of less than about 10% of a total capacitance of said capacitor (paragraph [0132]).

Allowable Subject Matter

3. Claims 44-48 and 142-146 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

4. Applicant's arguments filed January 14, 2008 have been fully considered but they are not persuasive.

5. In response to Applicants arguments with respect to claims 36 and 134, that "Reich et al. do not teach any monitoring of fluid locomotion" (page 2, last paragraph, line 1), the Examiner respectfully disagrees. Reich et al. disclose a capacitive sensor that detects any particle in a fluid

wherein the dielectric coefficient of the fluid is different than the dielectric coefficient of the particle (abstract). The capacitive sensor of Reich et al. will detect a liquid, such as an ink drop, in a channel filled with a fluid, such as air (paragraph [0108], lines 9-12). Since the sensor will also monitor the velocity of the ink drop (paragraph [0108], lines 9-12), it does monitor fluid locomotion, as claimed.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY J. DOLE whose telephone number is (571)272-2229. The examiner can normally be reached on Mon. thru Fri. from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Timothy J. Dole/
Primary Examiner, Art Unit 2831